

Title (en)
Linear motion bearing

Title (de)
Linearlager

Title (fr)
Palier linéaire

Publication
EP 0449595 B1 19960612 (EN)

Application
EP 91302652 A 19910326

Priority
US 50040490 A 19900328

Abstract (en)
[origin: EP0449595A2] A linear motion bearing is disclosed which includes a rail (22) having a plurality of load bearing surfaces (26a, 28a, 30a, 32a) and a carriage (12) which rolls smoothly along the rails to slidably support any of a plurality of devices such as individual tools, pillow blocks, etc. The bearing carriage includes a plurality of rolling element surfaces (26, 28, 30, 32) which define with the load bearing surfaces of the rail, load bearing raceways for reception of cylindrical rollers (24). The carriage further defines return raceways (34, 35, 38, 39) which communicate with the loaded bearing raceways for conducting the rollers between the loaded and return raceways. The loaded bearing surfaces have a unique convex shape facing the working surfaces of the rollers and thereby avoid undue stresses otherwise occurring at the roller ends. A plurality of molded plastic roller retainers (52, 54) are provided with integral inner end caps (76) to guide the rollers between loaded and return raceways. Outer end caps are positioned thereover to seal the bearing and facilitate lubrication. All but central roller retainers are preferably provided in two half sections, while the central retainers extend the length of the carriage. In alternate embodiments, the retainers are formed separate from the inner end caps and may be attached by ultrasonic welding or gluing, etc. <IMAGE>

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